

REMARKS

Claims 1-12 remain pending in this application. Claim 7 has been amended for purposes of clarity. No new matter has been added by this amendment.

Rejection of claims 1-12 under 35 U.S.C. 112, second paragraph

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 10, and 12 are rejected because, in the phrase “writing stream adjustment cues” the meaning of the term “cues” is deemed to be unclear. Applicant respectfully disagrees. “[S]tream adjustment cues” are the same as “stream adjustment data.” The specification provides that the “stream adjustment cues” are written in the REP data, therefore the cues are considered data. Specifically, the specification provides, in paragraph [0052] that there is “a module 13 for writing stream adjustment cues in the data REP, in communication with the preparation module 15 and intended to provide the module 15 with the instructions for modifying the parameters used to control the bit rate.” Thus, it is clear that “stream adjustment cues” are the same as “stream adjustment data.” In view of the above remarks, it is respectfully submitted that this phrase is clear and this rejection is satisfied.

Claim 6 is rejected because the phrase “several successive variations” is indefinite. Applicant respectfully disagrees. Claim 6 specifies that the writing module 13 of the receiver is modifying the parameter (the DLSR) artificially to induce a modification of the bitrate in the sender. The specification specifically provides that “[b]y successive incrementations of the delay introduced at the receiver (DLSR), the RTT (R) is modified artificially [by the writing module 13] so that the sender 2 is “made to believe” that the available bit rate is the one decodable by the receiver 1 and not the available network bit rate 5” (paragraph [0070]). From the above, it is clear that

the parameter is modified in successive variations. Thus it is respectfully submitted that this phrase is clear and this rejection is satisfied.

Claim 7 has been amended in accordance with the comments in the Office Action to further clarify the invention. As disclosed in the specification, the receiver is able to share its capabilities between several streams processed in parallel in the receiver. Claim 7 has been amended to state “wherein said estimating module is capable of determining a value to be attained for said bit rate of said stream of contents also as a function of a rate of sharing of said capabilities of said receiver between several streams.” Support for the amendment to claim 7 is provided throughout the specification and specifically in paragraph [0041]: “the estimation module is capable of determining a value . . . for the bit rate . . . also as a function of a rate of sharing of the capabilities of the receiver. In this way it is possible to manage the bit rates of several streams processed in parallel in the receiver . . . one may decide that such a stream should not consume more than 30% of the processing capabilities (for example in terms of CPU sharing), the remaining 70% being equitably distributed between the other streams).” In view of the above remarks and amendments to claim 7, it is respectfully submitted this rejection is satisfied and should be withdrawn.

In view of the remarks above regarding claims 1, 6, 10, and 12, and the amendment to claim 7, it is respectfully submitted that this rejection has been satisfied and should be withdrawn.

Claims 2-4, 5, and 7-9 are dependent on claim 1 and are thus considered patentable for the same reasons as claim 1. Claim 11 is dependent on claim 10 and is thus considered patentable for the same reasons as claim 10.

Rejection of claim 12 under 35 U.S.C. 101

Claim 12 is rejected under 35 U.S.C. 101 because the claimed subject matter is not directed to a legally recognized process, machine, manufacture, or composition of

matter. Claim 12 has been amended to be directed to a processing device in accordance with 35 U.S.C. 101. Support for this amendment is found throughout the specification and specifically at page 11, lines 16-22 as well as in original claims 1 and 10. In view of the amendments to claim 12, it is respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of claims 1-4 and 6-12 under 35 U.S.C. 102(b)

Claims 1-4 and 6-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et. al. (US 2001/0004352 A1).

The present claimed arrangement provides a device for the adjustment of the bit rate of a stream of contents as a function of processing capabilities of at least one receiver. The contents are transmitted by a sender to the receiver via a network, according to a communication protocol providing for a return transmission of reception data of the contents by the receiver to the sender. A module inputs information relating to the capabilities. A further module estimates a required level for the bit rate at least as a function of the information. A module for writing stream adjustment cues writes the adjustment cues for return transmission with the reception data to the sender. The adjustment cues are capable of bringing about a modification of the bit rate in relation to the required level. The communication protocol provides for a return transmission to the sender of at least one parameter relating to conditions of communication of the contents in the network between the sender and the receiver. The writing module is intended to modify the parameter in such a way as to use it to transmit the adjustment cues.

Watanabe describes a data receiving terminal. If data of a particular time section received from a data sending terminal does not satisfy a predetermined accumulation quality as the result of discrimination by a received-data quality discriminating section, an alternative-data sending requesting section requests a data sending terminal for alternative data satisfying the accumulation quality for the

unsatisfied data of the particular time section. The result is that the data receiving terminal can realize both reproduction of data with less sending delay and accumulation of high-quality data. (see Abstract)

The Office Action asserts that Watanabe describes “a module for inputting information relating to said capabilities, a module for estimating a required level for said bit rate at least as a function of said information, and a module for writing stream adjustment cues that is intended to write said adjustment cues for return transmission with said reception data to said sender, said adjustment cues being capable of bringing about a modification of said bit rate in relation to said required level, wherein said communication protocol providing for a return transmission to said sender of at least one parameter relating to conditions of communication of said contents in said network between said sender and said receiver, the writing module is intended to modify said parameter in such a way as to use it to transmit said adjustment cues” as recited in claim 1 of the present claimed arrangement. Applicant respectfully disagrees. The present arrangement describes a device for the adjustment of the bit rate of a stream as a function of processing capabilities of a receiver. The processing capabilities of the receiver are adequately described in the specification. The “resources of the receiver [are] fit for processing the data received, for example for a decoding of an MPEG 2 stream. These capabilities may therefore include a particular data processing speed (typically a CPU, standing for Central Processing Unit, performance), a memory volume (such as that of a RAM memory – standing for Random Access Memory), an energy consumption and/or presence of components dedicated to the processing of the contents (for example a hardware decoder). On the other hand, this definition excludes entities having pure stream regulation functions, in this instance buffer memories” (see specification, paragraph [0022]). A parameter of the protocol normally devoted to properties of circulation around the network is modified by the written module on the basis of the processing capabilities of the receiver. Watanabe does not disclose or suggest these features of the present claimed arrangement.

The Office Action asserts that Watanabe describes “a module for inputting information relating to the processing capabilities of the receiver” as recited in claim 1 of the present arrangement. Applicant respectfully disagrees. In Watanabe, the received data quality discriminating section 33 is only able to judge the quality of the received AV data by consulting the data quality information attached by the sending terminal 2 to the AV data (Fig. 5, paragraphs [0085] and [0086]). The quality of the received data is not based upon the processing capabilities of the receiver. The data quality discriminating section 33 of Watanabe merely takes at its input, the received data which is independent on the capacity of the receiver. Therefore, Watanabe neither discloses nor suggests “a module for inputting information relating to the processing capabilities of the receiver” as recited in claim 1 of the present arrangement.

The Office Action further asserts that Watanabe describes “a module for estimating a required level for said bit rate at least as a function of said information” as recited in claim 1 of the present arrangement. Applicant respectfully disagrees. Watanabe merely describes an accumulating section that is an HDD or recording medium that is able to accumulate received data which is judged by the discriminating section 33 as satisfying the accumulation quality (paragraphs [0091] and [0122]). Accumulating section 25 is a recording medium for storing AV data of a given quality level (Fig. 5). Such a recording medium cannot compute any values and in particular any bit rate level. Therefore, Watanabe neither discloses nor suggests “a module for estimating a required level for said bit rate at least as a function of said information” as recited in claim 1 of the present arrangement.

The Office Action also asserts that Watanabe describes “a module for writing stream adjustment cues that is intended to write said adjustment cues for return transmission with said reception data to said sender, said adjustment cues being capable of bringing about a modification of said bit rate in relation to said required level” as recited in claim 1 of the present arrangement. Applicant respectfully disagrees. Watanabe describes that the differential data request information accumulating section 39 is an accumulating section and therefore a recording medium accumulating AV data.

This is wholly different from the present claimed arrangement. Watanabe does not describe “a module for writing stream adjustment cues that is intended to write said adjustment cues for return transmission with said reception data to said sender, said adjustment cues being capable of bringing about a modification of said bit rate in relation to said required level” as recited in claim 1 of the present arrangement. Therefore, Watanabe neither discloses nor suggests “a module for writing stream adjustment cues that is intended to write said adjustment cues for return transmission with said reception data to said sender, said adjustment cues being capable of bringing about a modification of said bit rate in relation to said required level” as recited in claim 1 of the present arrangement.

The Office Action also asserts that Watanabe describes a “communication protocol providing for a return transmission to said sender of at least one parameter relating to conditions of communications of said contents in said network between said sender and said receiver, the writing module is intended to modify said parameter in such a way as to use it to transmit said adjustment cues” as recited in claim 1 of the present arrangement. Applicant respectfully disagrees. In Watanabe, the parameters of the RR packets are used to transmit the time information as defined by the RTCP protocol (paragraph [0023]). More specifically, the SR packet time information and the delay time information indicates a period of time lapsed in the receiving terminal from when the receiving terminal received the SR packet until when the receiving terminal sends the RR packet in response to the SR packet (paragraph [0023]). Watanabe does not disclose or suggest a means to modify one of the above mentioned parameters in a way to transmit adjustment cues that are capable of modifying the bit rate in relation to a required bit rate level estimated as a function of processing capabilities of the receiver. Therefore, Watanabe neither discloses nor suggests a “communication protocol providing for a return transmission to said sender of at least one parameter relating to conditions of communications of said contents in said network between said sender and said receiver, the writing module is intended to modify said parameter in such a way as to use it to transmit said adjustment cues” as recited in claim 1 of the present claimed arrangement.

Claim 10 includes features similar to claim 1 and is considered patentable for the same reasons set forth above regarding claim 1. Claims 2-4 and 6-9 are dependent on claim 1 and are thus considered patentable for the same reasons as claim 1. Claims 11 and 12 are dependent on claim 10 and are thus considered patentable for the same reasons as claim 10.

Consequently, it is respectfully submitted that the rejection of claims 1-4 and 6-12 under 35 U.S.C. 102(b) is satisfied and should be withdrawn. In view of the above remarks, it is respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of claim 5 under 35 U.S.C. 103(a)

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (US 2001/0004352 A1) in view of Teruhi et al. (US 7327676 B2).

Teruhi describes a source node 11 which obtains from a destination node 12, quality information on routes 31 and 32 to the node 12, and adaptively changes data distribution ratios for the multiple routes based on the quality information. (see Abstract)

Teruhi does not describe “a module for inputting information relating to said capabilities, a module for estimating a required level for said bit rate at least as a function of said information, and a module for writing stream adjustment cues that is intended to write said adjustment cues being capable of bringing about a modification of said bit rate in relation to said required level, wherein said communication protocol providing for a return transmission to said sender of at least one parameter relating to conditions of communication of said contents in said network between said sender and said receiver, the writing module is intended to modify said parameter in such a way as to use it to transmit said adjustment cues” as recited in claim 1 of the present claimed

arrangement. However, the Office Action asserts that Teruhi describes that “the parameter of the protocol comprises a contents loss rate” as recited in claim 5 of the present claimed arrangement. Applicant respectfully disagrees.

Claim 5 is dependent on claim 1, therefore, all arguments with respect to claim 1 discussed above are applicable to claim 5. Teruhi merely describes that “the receiver report (RTCP-RR) 70 has version information V, padding P, receiver report count RRC, packet type PT, message length ML, synchronization source identifier of packet sender SSRC, synchronization source identifier of sender 1, packet loss ratio 71, cumulative number of packets lost (NPL), inter-arrival jitter (J) 72, last sender report timestamp LSR and delay since last sender report DLSR. Of them, the synchronization source identifier of packet sender SSRC, the packet loss ratio 71, the inter-arrival jitter 72, last sender report timestamp 73 and the delay since last sender report DLSR 74 are related directly to the data transmission control method according to the present invention” (Fig. 4, col. 4, lines 40-52). This is not the same as a “parameter of the protocol [that] comprises a contents loss rate” as recited in claim 5 of the present claimed arrangement. Therefore, Teruhi neither discloses nor suggests that “the parameter of the protocol comprises a contents loss rate” as recited in claim 5 of the present claimed arrangement.

In addition, a combined system of Watanabe and Teruhi, similarly to the individual systems neither discloses nor suggests that “the parameter of the protocol comprises a contents loss rate” as recited in claim 5 of the present claimed arrangement. The combination of Watanabe and Teruhi would instead result in a system where there would be a receiver without any device for the adjustment of the bit rate of a stream of contents as a function of processing capabilities.

Consequently, it is respectfully requested that the rejection of claim 5 under 35 U.S.C. 103(a) be withdrawn. In view of the above remarks, it is respectfully submitted that this rejection is satisfied and should be withdrawn.

Application No. 10/539,431

Attorney Docket No. PF030007

Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No additional fee is believed due. However, if an additional fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,
Guillaume Bichot

By: 

Jack Schwartz

Registration No. 34,721

Telephone No.: (609) 734-6866

Thomson Licensing, LLC
Patent Operations
PO Box 5312
Princeton, NJ 08543-5312
October 23, 2008